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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/616,096	07/08/2003	Dmitry Oleynikov	UNMC/0006	9525

7590 02/28/2005  
Moser, Patterson & Sheridan, LLP  
Suite 1500  
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Houston, TX 77056-6582

EXAMINER
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IP, SHIK LUEN PAUL

ART UNIT	PAPER NUMBER
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2837

DATE MAILED: 02/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

11A

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/616,096	OLEYNIKOV ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Paul Ip	2837	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 December 2004.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,3-14,16-19 and 23-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-14,16-19 and 23-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 3-14, 16-19, and 23-28 are rejected under 35 U.S.C. 102(e) as being anticipated by Mullick et al. (US 2003/0167000 A1, Provisional Application No. 60/180,960 filed on Feb. 8, 2000).

With respect to claims 1, 13, 14, 16-17, 23, 24, 26, 27, and 28, Mullick et al show in figures 2-14B mobile micro-robots for use inside an animal or human body during minimally invasive surgery or diagnostic operations. Mullick et al show in figure 1 a body in the form as an ingestible capsule 12, a mobilization element (see figures 6 and 7 elements 140, 142, 160), a remote control device [0071], a manipulator arm (see figure 10 element 300 and figure 11 element 400) [0080], a power supply 22, and at least one sensor 14 (see the abstract).

With respect to claim 3, Mullick et al show in figures 2-14B that the micro-robot body is shaped like a cylinder.

With respect to claims 4-6, Mullick et al show in figure 6 the wheels 140 and 142 have treads.

With respect to claims 7-9, 18, and 19, Mullick et al show in figure 1 that the remote control is wireless.

With respect to claims 10-11, Mullick et al show in figure 6 wheels 140 and 142. Mullick et al disclose at [0071] the wheels but silent about the actuator. However, it is inherent to use the actuator or motor such as brushless direct current motor or permanent magnet motor as recited in the claim for the best result of the mobility functions.

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With respect to claim 12, Mullick et al show in figure 1 the internal power supply. Since the mobile micro-robot is used inside an animal body as recited at the preamble, it defeats the purpose of remote control with an external power supply, it is not limit Mullick et al's internal power supply cannot be used for external.

With respect to claim 25, Mullick et al show in figure 11 that the arm is articulated.

### ***Response to Amendment***

3. Applicant's arguments with respect to claims 1, 3-14, 16-19, and 23-28 have been considered but are moot in view of the new ground(s) of rejection.

Applicant argues that Kim et al fails to disclose a manipulator arm having a free end movable to assist in surgical tasks. Mullick et al teaches and suggests a free end movable arm can include an extendable biopsy forceps...etc See paragraphs [0080] [0081].

Furthermore, the claims of the invention recite a micro robot structure, such as shown in the scientific movie journey in human body for performing diagnostic operation or therapeutic operation, the micro robot is well known in the art. The claims fail to particular define the structures as shown in figures 1-5 and 8-15 of the invention.

4. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

### ***Citation of Pertinent References***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The patents/publications to Sunaoshi 2004/0254680, Kim et al 2002/0173700, Kim et al 2002/0171385, Kim et al 2002/0111535, Sproul 6,832,988, Kim et al 6,824,510, Kim et al

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6,824,508, Kim et al 6,702,734, and Salcudean et al 5,382,885, disclose micro-robot/robot control device with articulated arm for surgical operations.

***Communication Information***

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul Ip whose telephone number is (571)-272-1941. The examiner can normally be reached on Monday to Friday from 6:30 am to 3:00 pm Eastern time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Martin, can be reached on (571)-272-2107. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Paul Ip  
Primary Examiner  
Art Unit 2837